

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

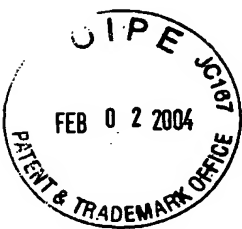


FIG. 1A

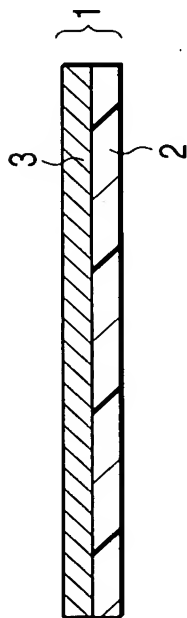


FIG. 1B

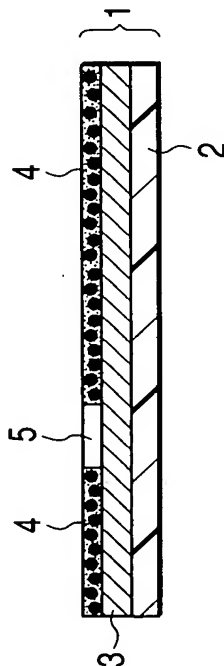


FIG. 1C

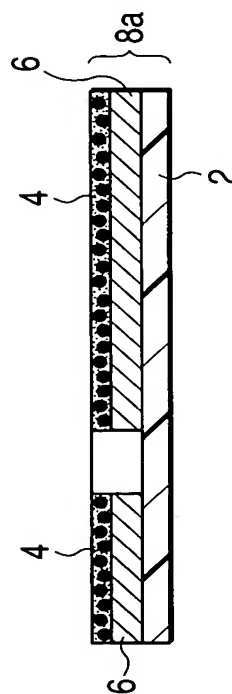


FIG. 1D

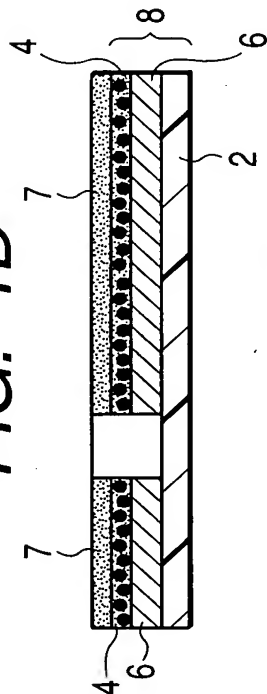


FIG. 1E

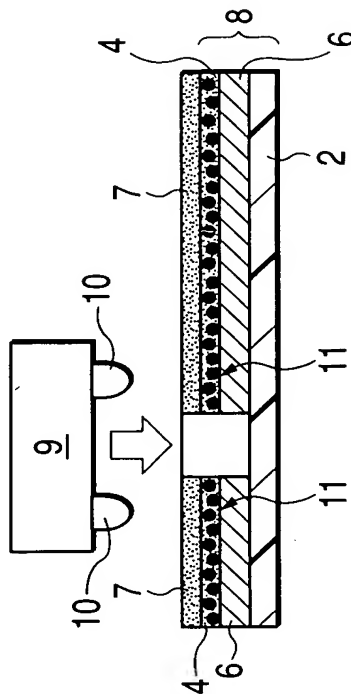


FIG. 1F

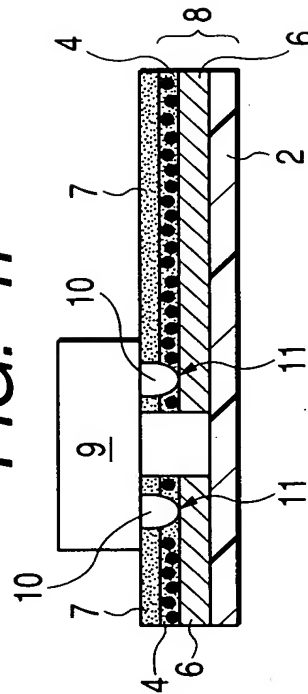


FIG. 2A

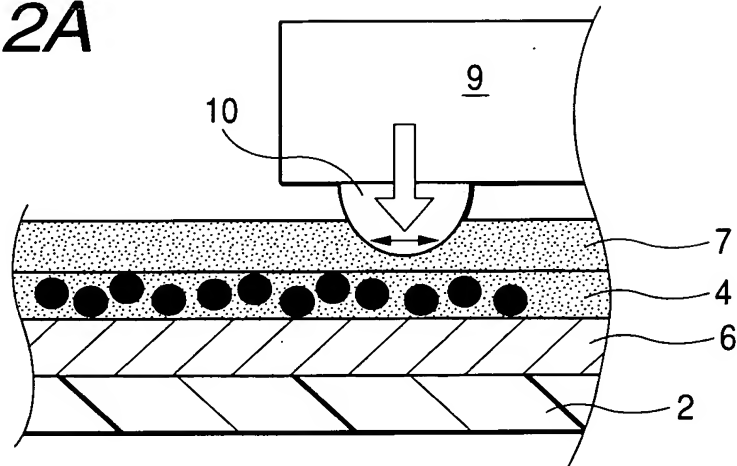


FIG. 2B

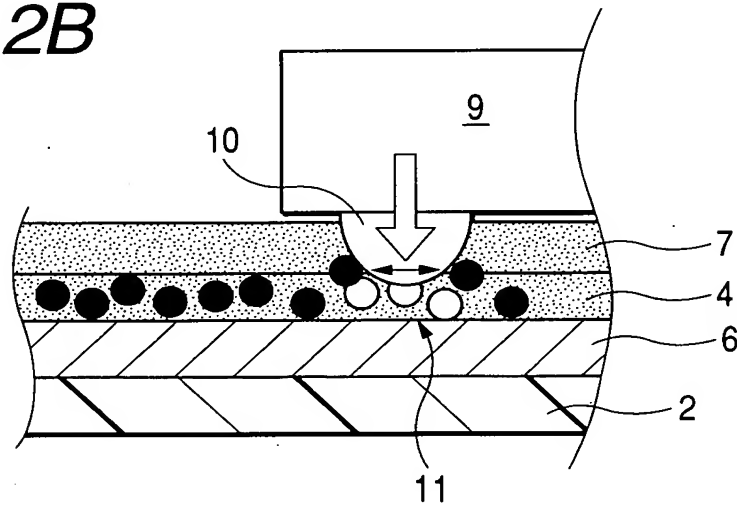


FIG. 2C

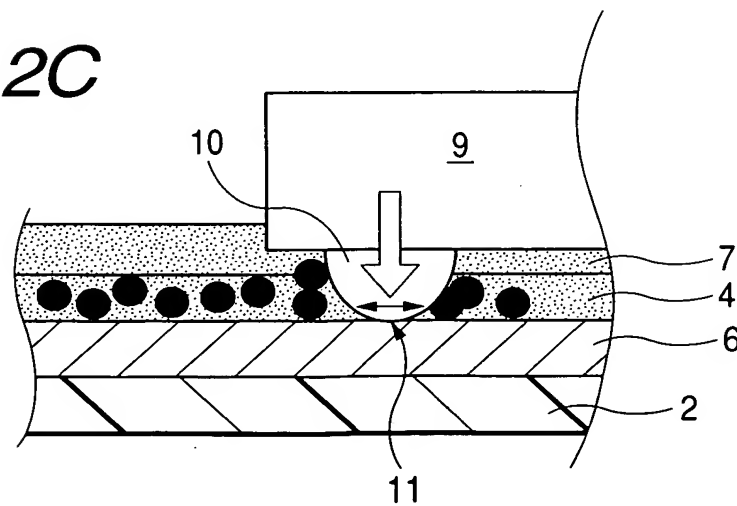


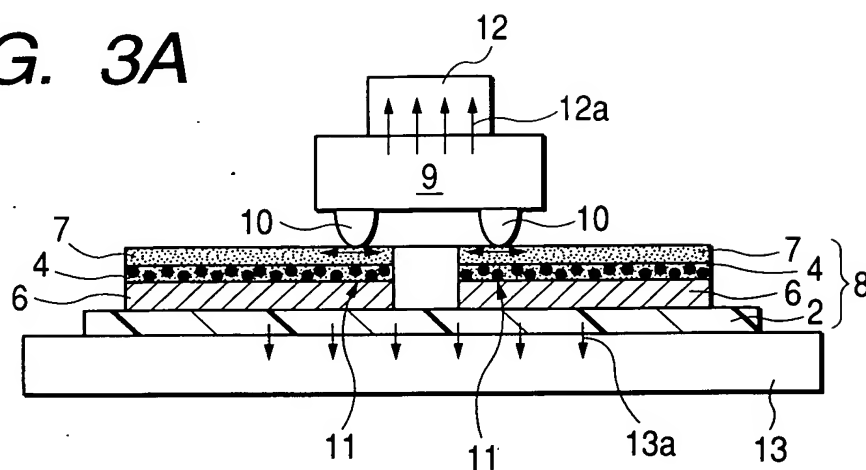
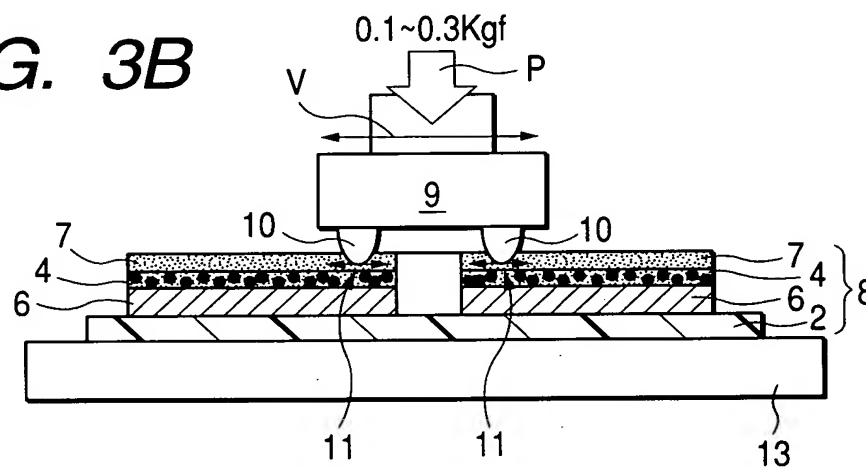
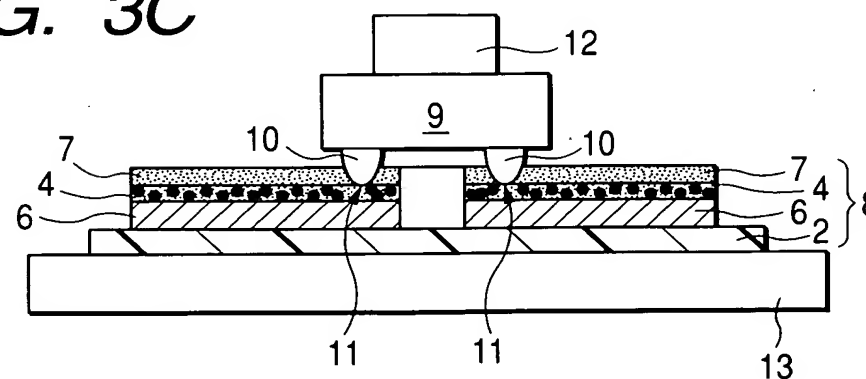
FIG. 3A**FIG. 3B****FIG. 3C**

FIG. 4A

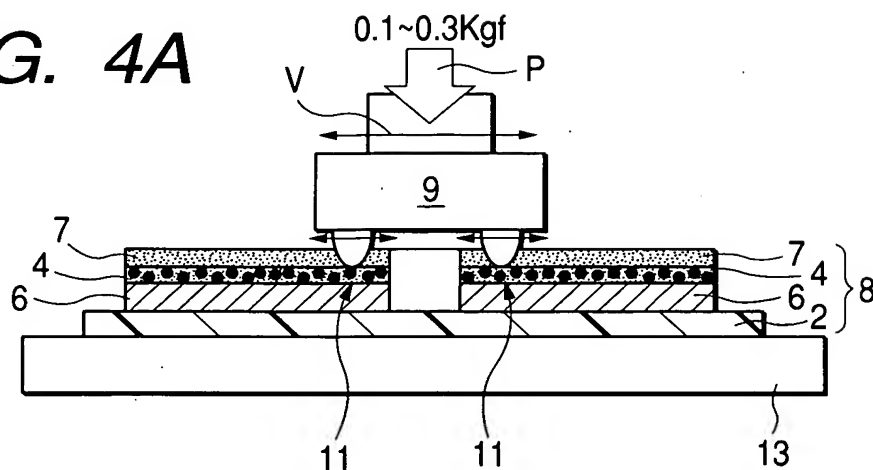


FIG. 4B

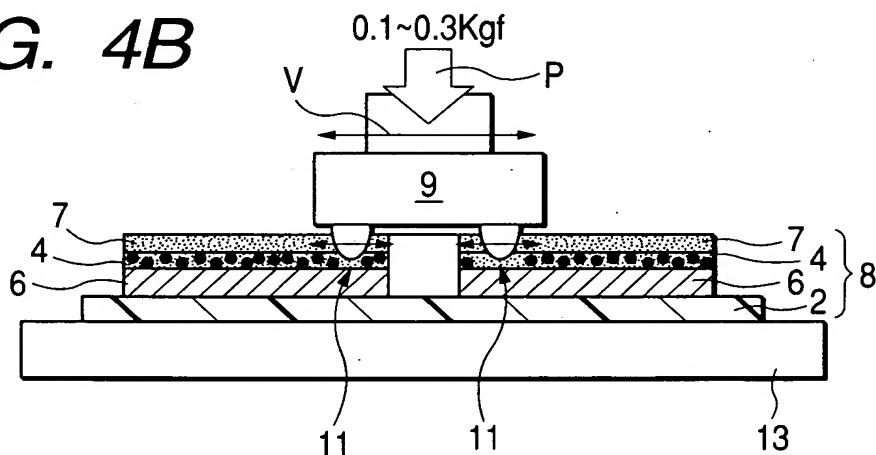


FIG. 4C

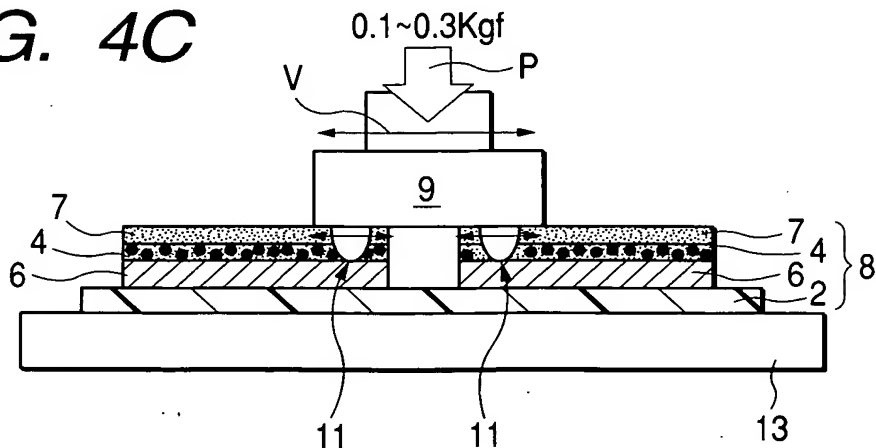


FIG. 5

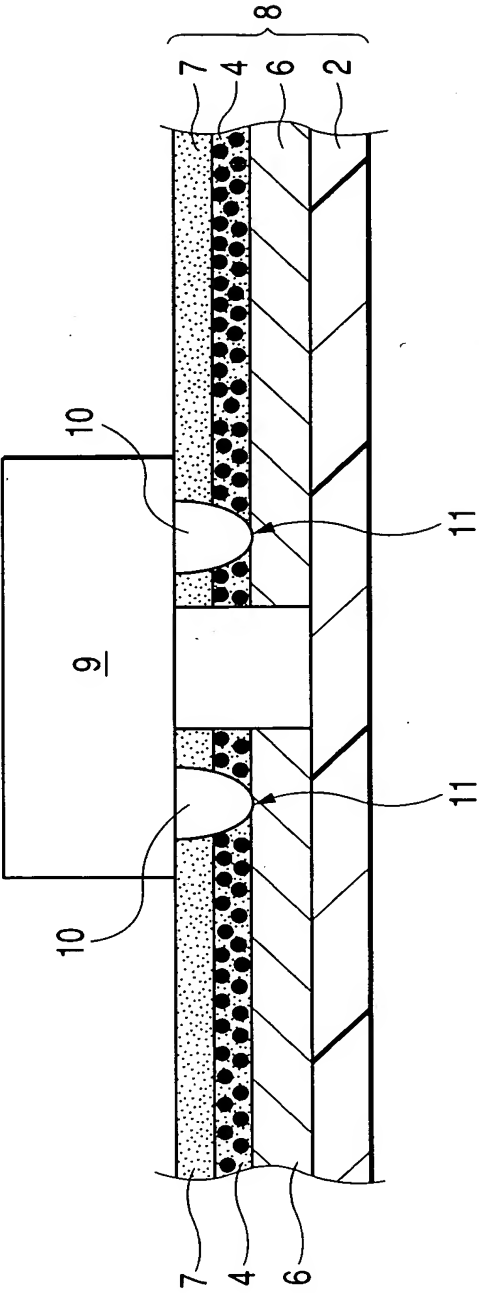


FIG. 6A

SEMICONDUCTOR MOUNTING METHOD	ULTRASONIC BONDING	EMBODIMENT
BONDING STRENGTH	200 ~ 250	1400 ~ 1700

FIG. 6B

SEMICONDUCTOR MOUNTING METHOD	THIRD METHOD OF THE RELATED ART	EMBODIMENT
SHORT-CIRCUIT FAILURE OCCURRENCE RATIO	5.0%	0.0%

FIG. 7A

SiO ₂ PARTICLES	NONE	PRESENT (EMBODIMENT)
SEMICONDUCTOR CHIP BONDING FAILURE (100 TESTS)	96.0%	0.0%

FIG. 7B

SiO ₂ PARTICLES	1 ~ 2 μ m	3 ~ 4 μ m (EMBODIMENT)
SEMICONDUCTOR CHIP BONDING FAILURE (100 TESTS)	50.0%	0.0%

FIG. 8

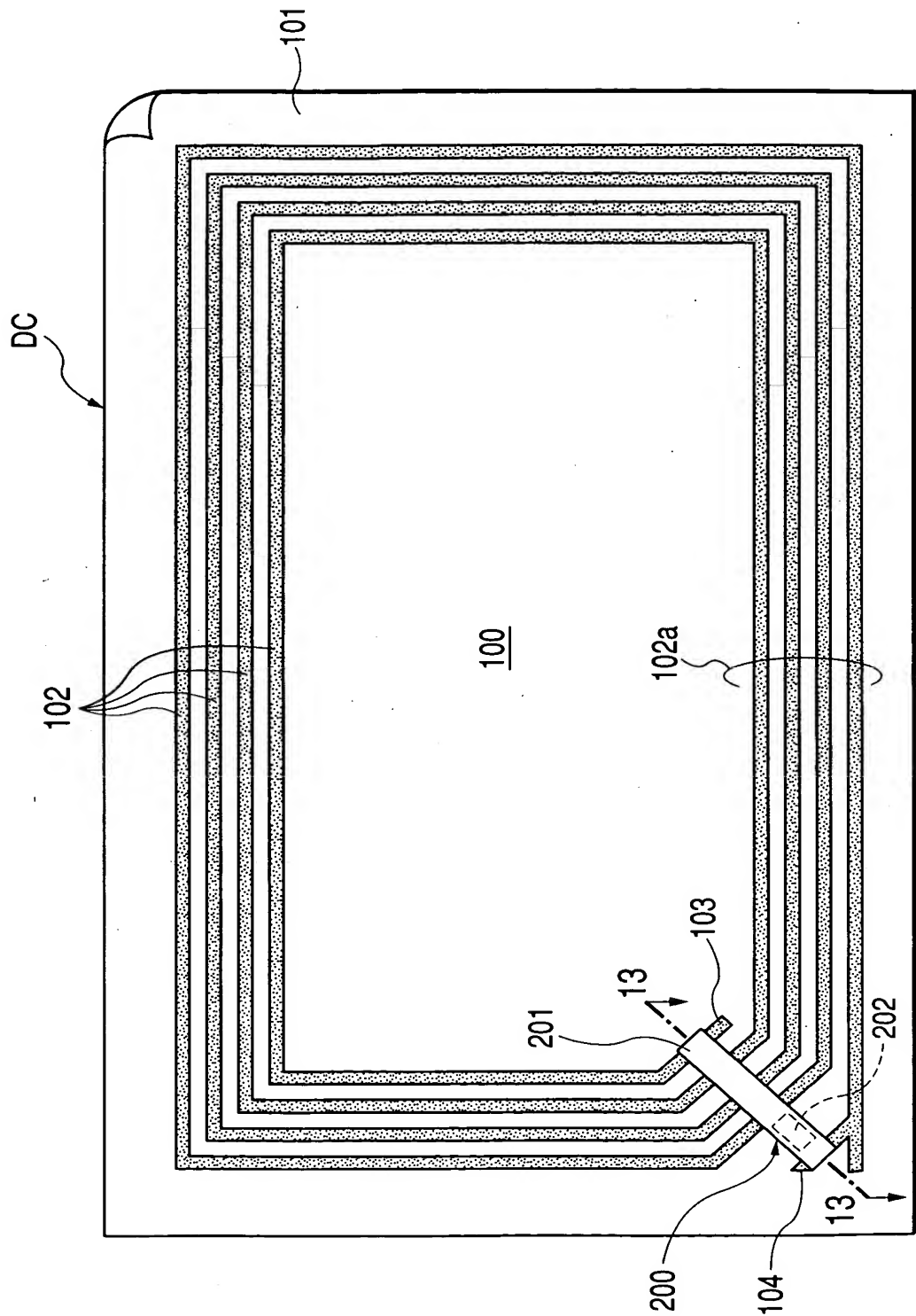


FIG. 9

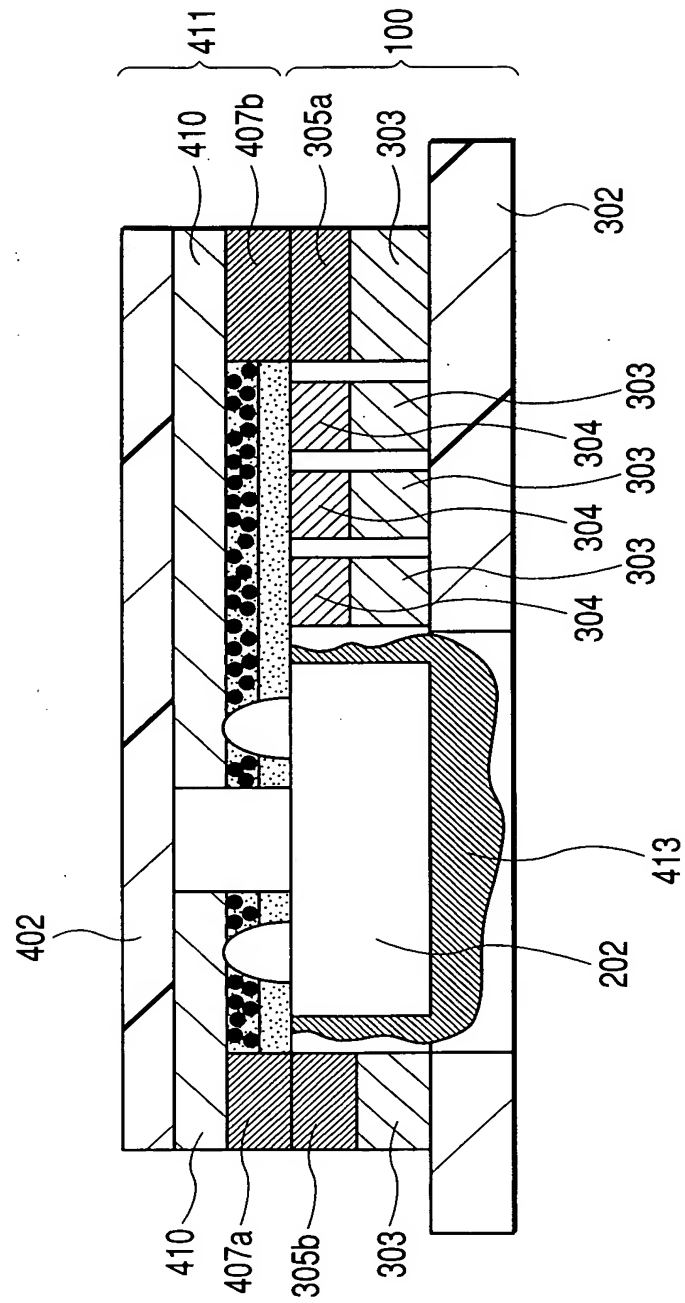
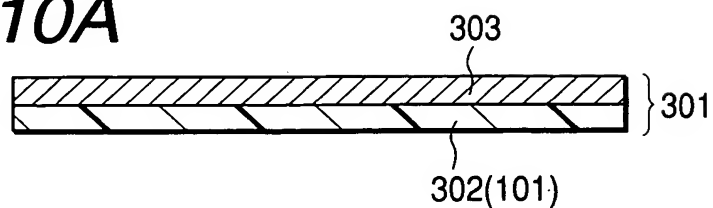
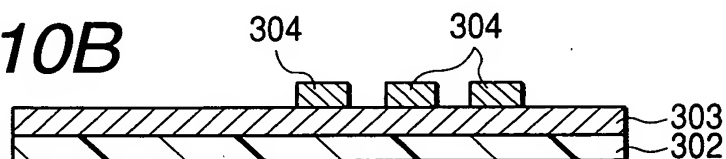
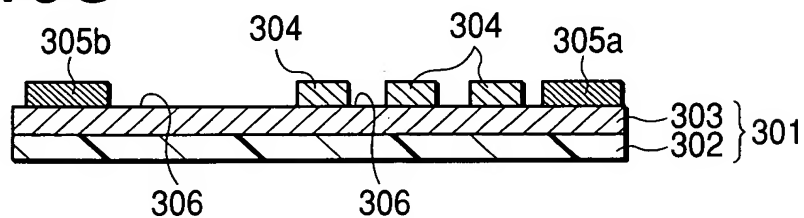
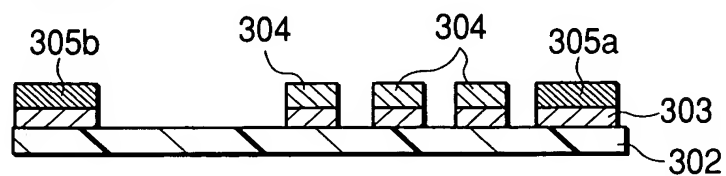
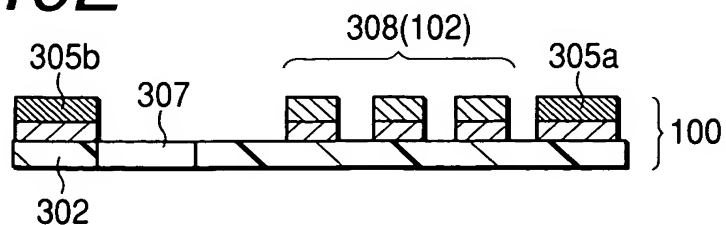


FIG. 10A**FIG. 10B****FIG. 10C****FIG. 10D****FIG. 10E**

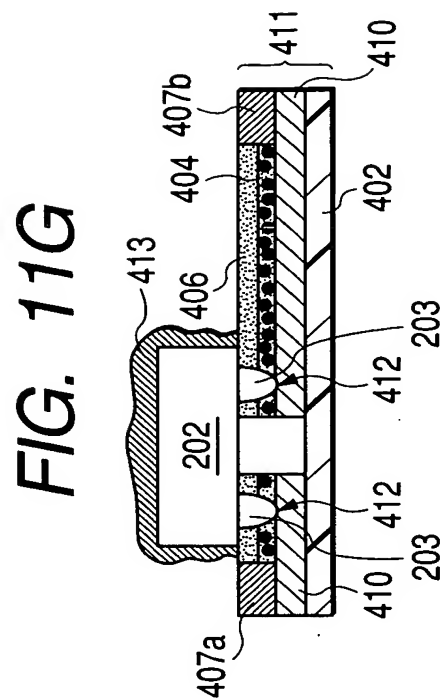
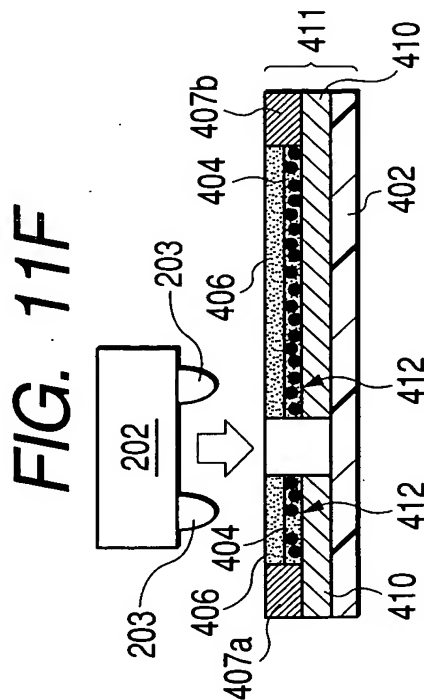
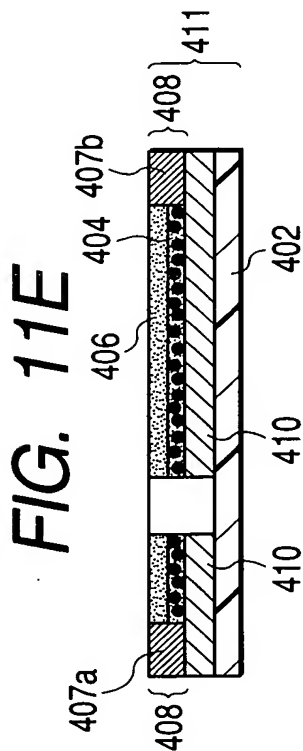
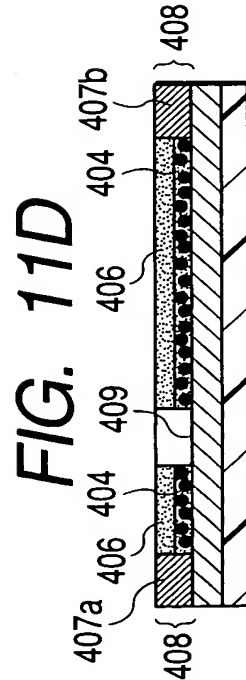
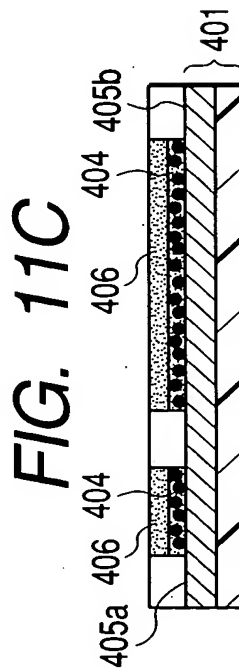
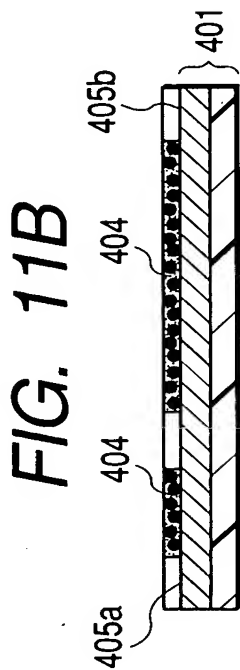
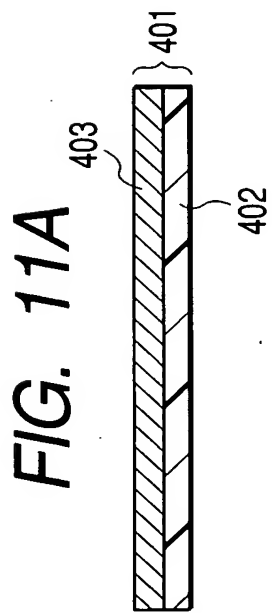


FIG. 12A is a cross-sectional view of a semiconductor device 100 and a manufacturing process. The top part shows a substrate 200 with a trench 202, a gate 203, and various layers 402, 410, 407a, 404, 406, and 413. An arrow points down to the bottom part, which shows the device 100 with a base 302, a gate 308, and various layers 305b, 307, 305a, 303, and 304.

FIG. 13

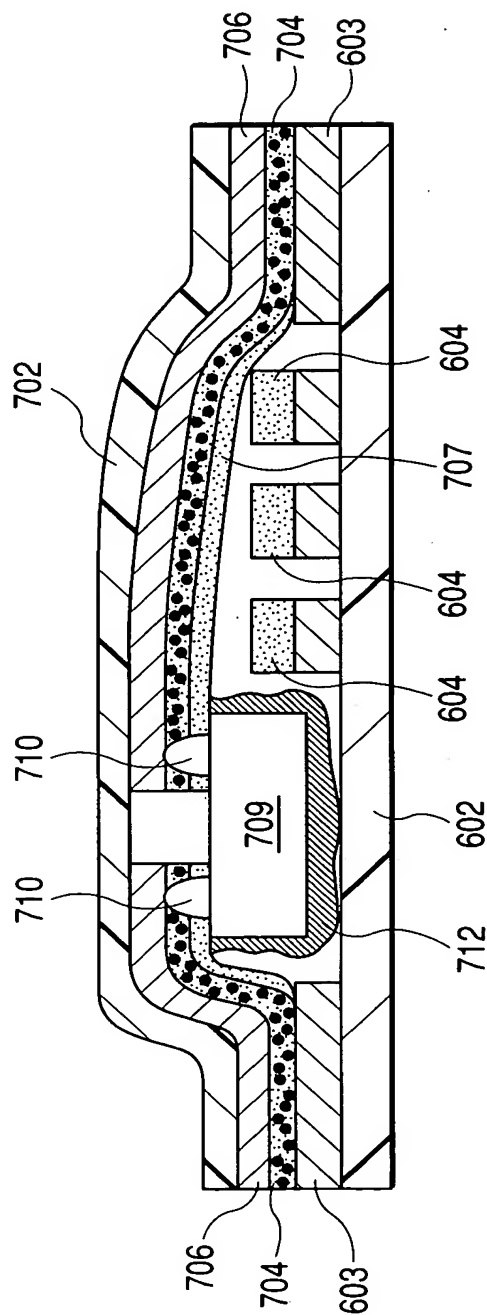
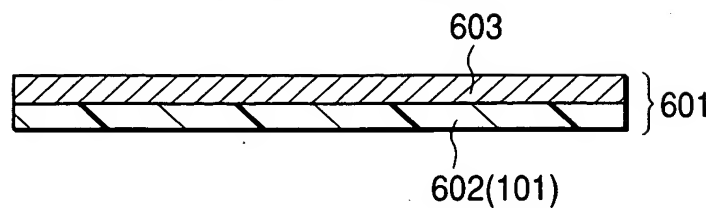
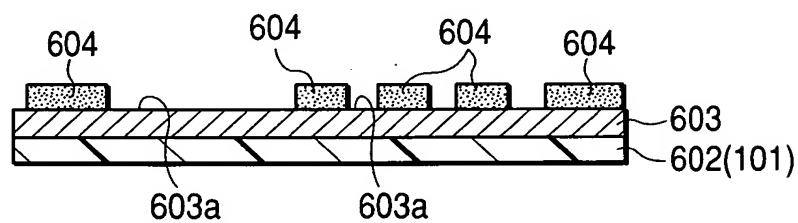
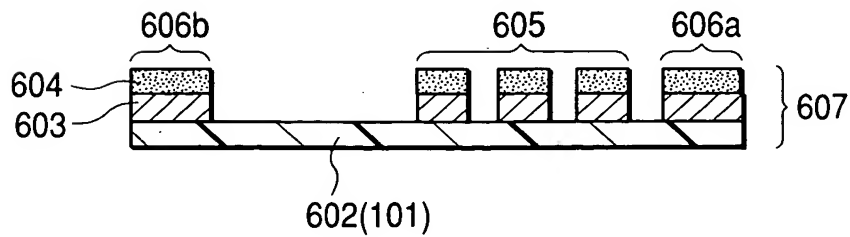


FIG. 14A**FIG. 14B****FIG. 14C**

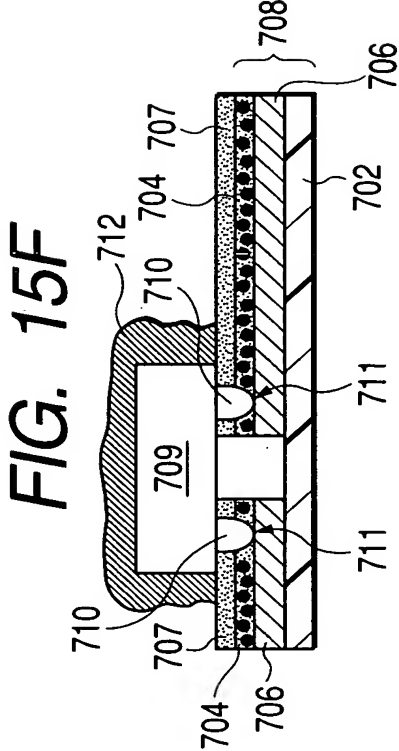
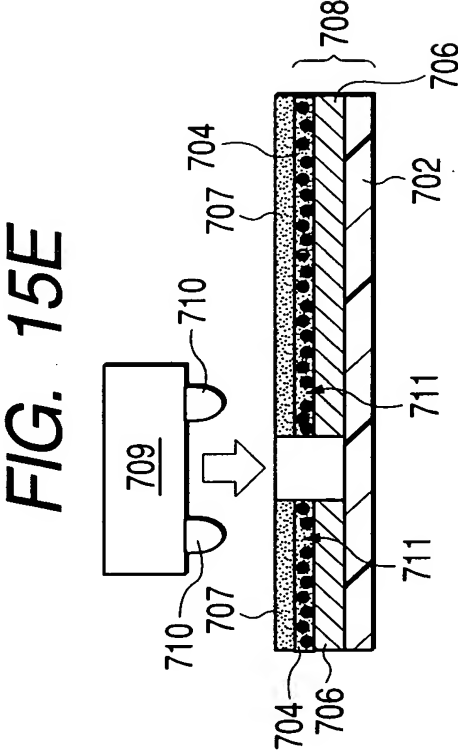
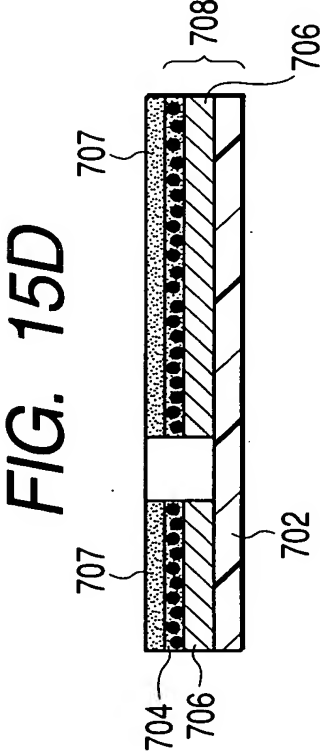
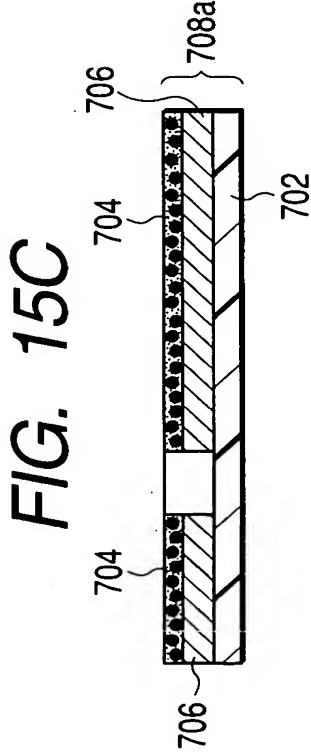
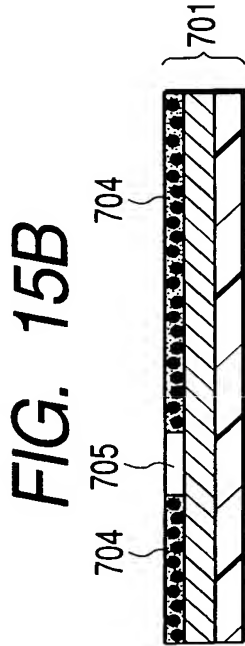
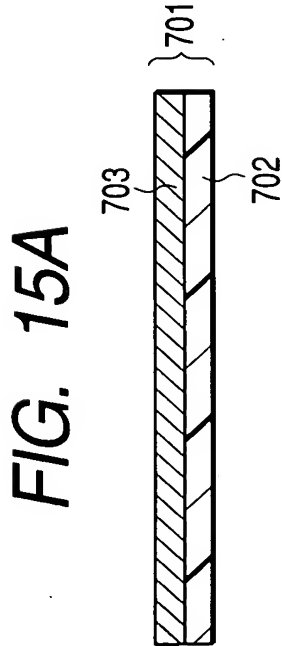


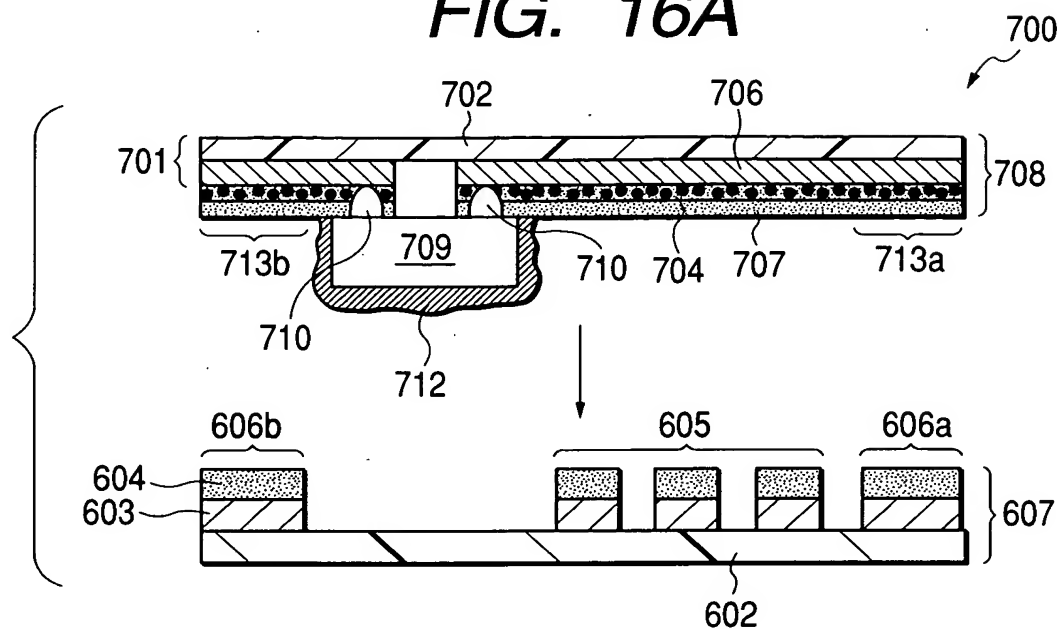
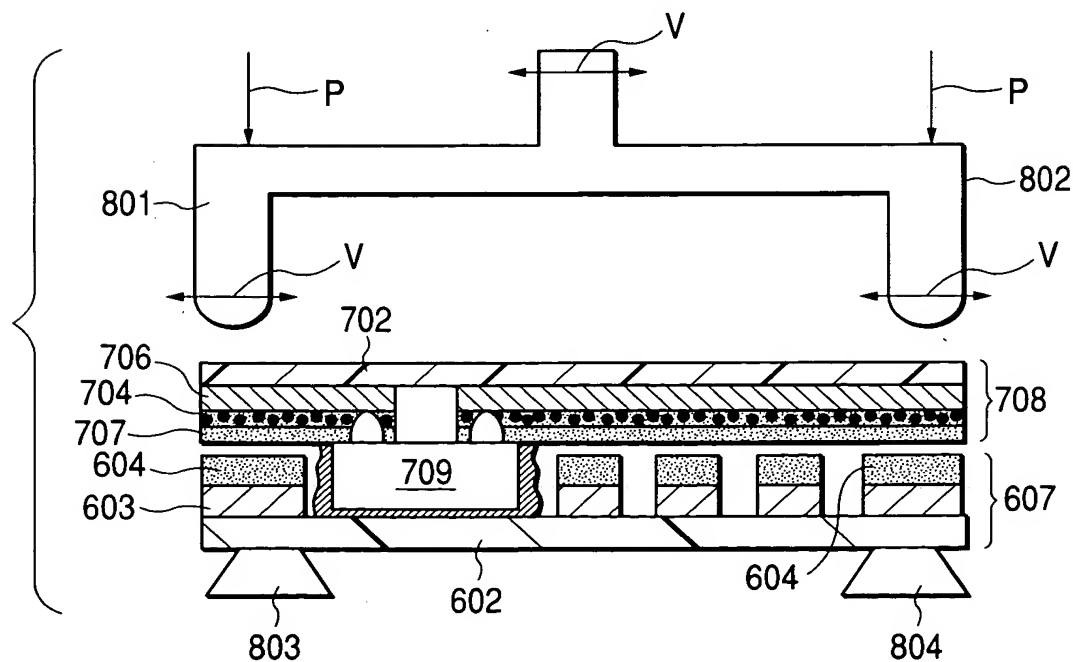
FIG. 16A**FIG. 16B**

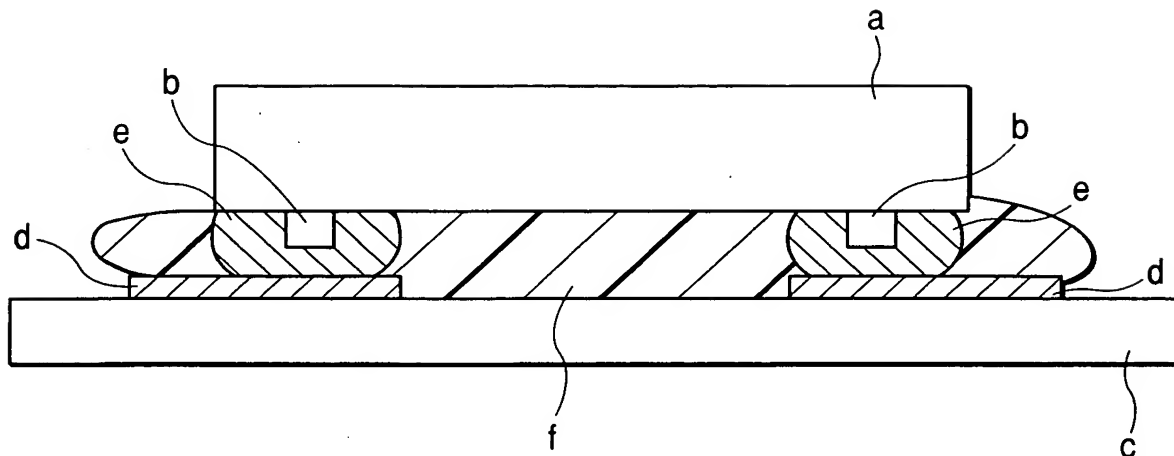
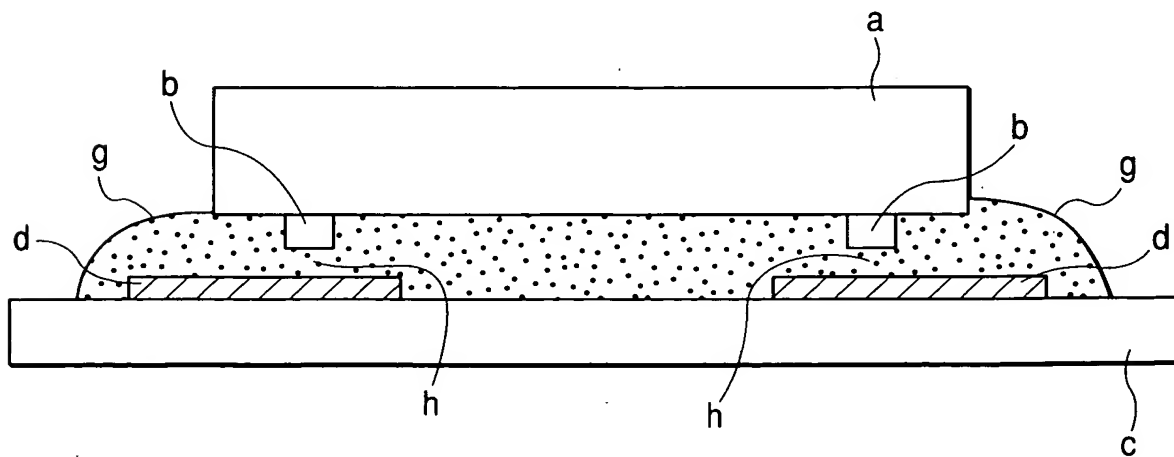
FIG. 17*FIG. 18*

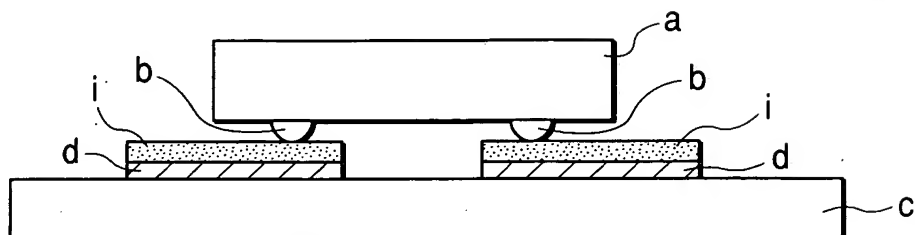
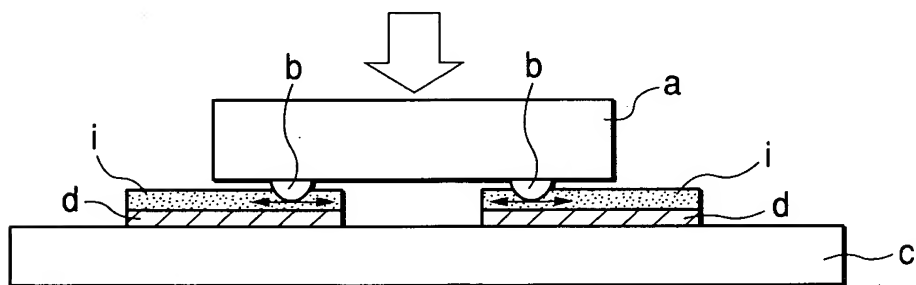
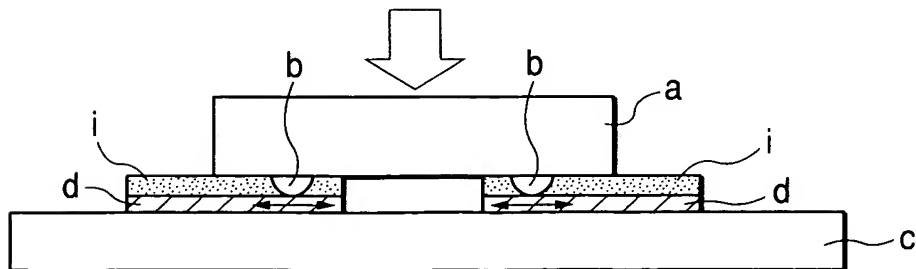
FIG. 19A**FIG. 19B****FIG. 19C**

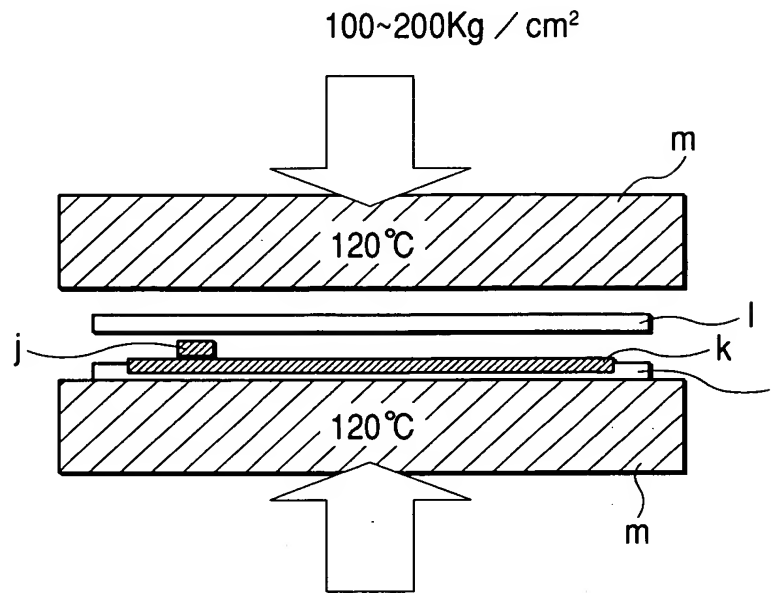
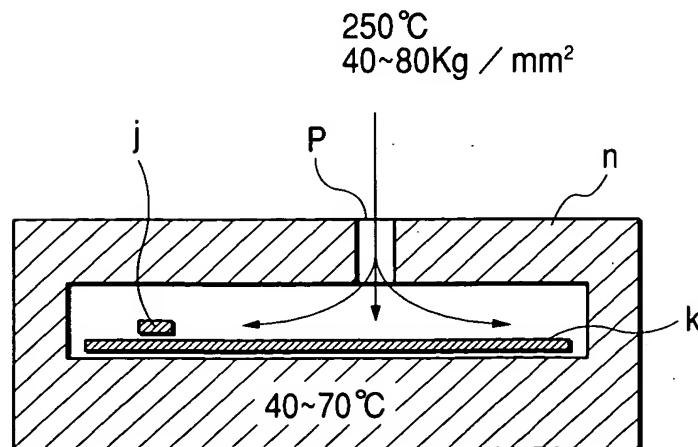
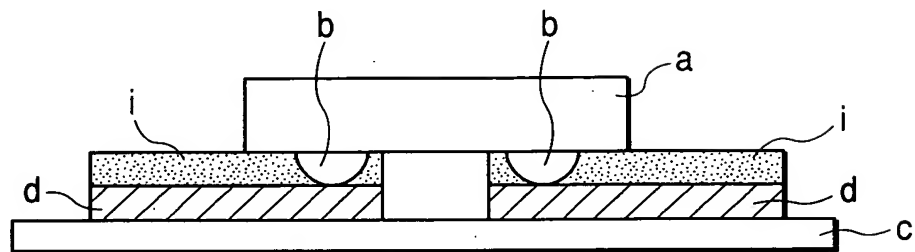
FIG. 20A**FIG. 20B**

FIG. 21A**FIG. 21B**